

# SEATING GUIDELINES FOR CLASSES 3.5-4.0



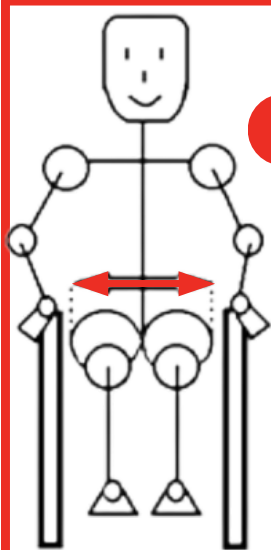
## Class 3.5 and 4.0 athletes generally:

- can lean fully forward and return to upright without arm support
- can lean fully to one side or partially to both sides
- can stand on their casters and maintain balance during strong contact in the forward plane
- can push their pelvis back into their backrest to stabilize in contact situations or when leaning sideways
- can jump or tilt while holding the ball with both hands

## Proper seating will allow the athlete to:

- efficiently use all available lower extremity muscles
- position their hips ready for action, ideally bent less than 90 degrees, adducted and internally rotated

## STEP BY STEP



### 1 SEAT WIDTH

Ideal seat width can be found by trying different chairs or measuring sitting width.

There should be minimal space between the athlete and the side guards.

**TIP**

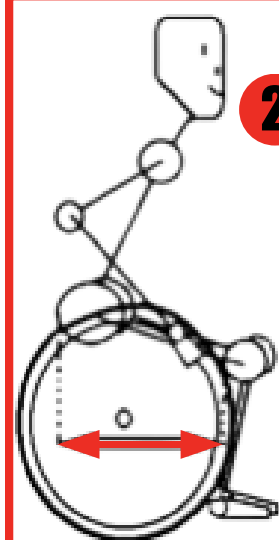
### 3 CUSHION

Most class 3.5-4.0 athletes can use a regular 2" (5cm) hard foam cushion.

### 4 WHEEL SIZE

Recommended 25" (559mm) for women and 26" (590mm) for men.

**TIP** Smaller wheels make acceleration easier; larger wheels offer a higher top speed and can be a better anatomical fit for some players.



### 2 SEAT DEPTH

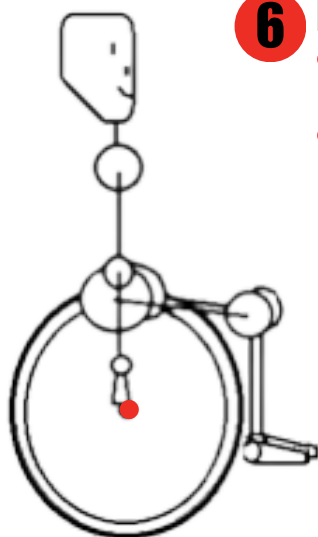
Ideal seat depth can be found by trying different chairs or measuring from the back of the pelvis to 2" (5 cm) behind the knee.

### 5 CAMBER

(angle of rear wheels in relation to the ground)  
Recommended 16°-18° for class 3.5-4.0 athletes who have good trunk control, while still remaining as narrow as possible to fit into the key easily.

A wider base makes the wheelchair more responsive; a narrower base can fit into tighter spaces.

**TIP**



## 6 REAR SEAT HEIGHT

- The maximum seat height for class 3.5 and 4.0 athletes is 58cm.
- The athlete's fingertips should be close to the axles of the wheels
- The athlete should be able to place hands at 12 o'clock without hiking their shoulders
- The elbows should be bent at a maximum of 90°

No matter the seat height, the athlete should always be low enough to pick up a ball off the floor using the rear wheels.

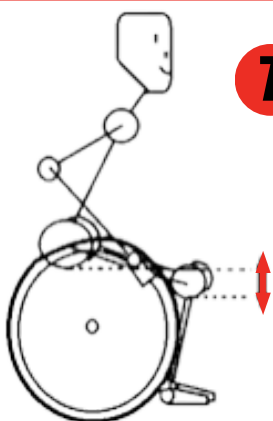
**TIP**

A lower rear seat height allows the athlete to:

- get up more easily from the floor after a fall
- lean more easily on wheels for support

A higher rear seat height allows the athlete to:

- reach higher up when catching or rebounding
- be closer to the basket when shooting



## 7 FRONT SEAT HEIGHT

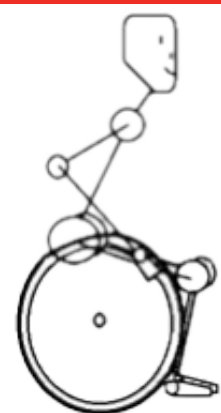
Typically, class 3.5 and 4.0 athletes benefit from having their front seat height lower than their rear seat height. Lower-placed knees will place the hips in a more ready-for-action position.

Lower placed knees:

- allow the athlete to reach further forward and pick up the ball more easily from the floor

Higher placed knees:

- provide stability in the forward plane
- ensure the athlete's pelvis does not slide forward

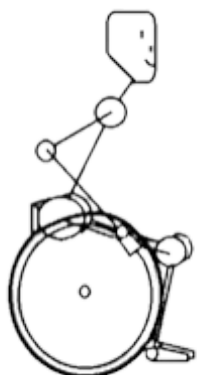


## 8 FOOT PLATE

The foot plate should be high enough to sustain the weight of the lower legs, yet low enough to not raise the thighs off the seat. Ankles should be positioned directly under the knees or farther back towards the rear wheels.

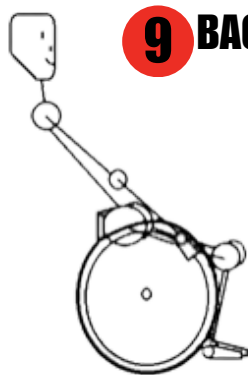
**TIP**

If the athlete has very flexible ankles the ball of the feet should be positioned higher than the heel or the athlete may wear ankle foot orthoses.



## 9 BACKREST

- The backrest serves to block the pelvis of class 3.5-4.0 athletes from moving too far back, leaving the lower trunk free to move and rotate.
- The typical height is the mid height of the pelvis.



## 10 STRAPPING

- Pelvis should be secured to the chair using a ratchet strap positioned as close to the hips as possible.
- A below knee ratchet strap (just below kneecaps) will often be useful for class 3.5 and 4.0 athletes to kneel on and increase the use of their quadriceps muscles

## 11 FRAME LENGTH

Longer wheelchair frame

- allows athlete to keep defenders farther away while shooting or passing

Shorter wheelchair frame

- lighter wheelchair
- can pivot within a tighter space



## 12 ANTI-TIP CASTERS

- Class 3.5 and 4.0 athletes with 2 back wheels will benefit from additional stability when leaning back over their backrest to shoot, pass, or place pressure on a shooting opponent.
- The back wheels should be low enough to avoid rocking back and forth when leaning forward and back.
- They should be high enough to prevent the rear wheels from spinning.

## 13 SIDE TO SIDE ASYMMETRY

Most class 3.5 and 4.0 athletes are symmetric when pushing or pivoting.

For those who are leaning or rotating more towards one side than the other, it may be due to a knee or hip contracture or a pelvic asymmetry.

### Possible solutions:

- Knee contracture: shorten seat depth
- Hip contracture: lower one knee
- Pelvic asymmetry: extra support under the lower hip, typically with a firm foam wedge

## 14 CENTER OF GRAVITY

Class 3.5 and 4.0 athletes show excellent trunk control and can maintain their balance with an aggressive COG adjustment (i.e. the weight of the player is positioned closer to the rear than the front).

Less aggressive COG

- more stability when shooting and leaning back

More aggressive COG

- more speed
- more maneuverability

Every athlete is different, and finding the right chair fit can require a lot of trial and error. Don't get discouraged if something doesn't work right away, get creative finding a solution!

Seating of athletes should follow the Wheelchair Basketball Canada Rule of Two Guidelines. For more information, visit [wheelchairbasketball.ca/the-sport/safe-sport](http://wheelchairbasketball.ca/the-sport/safe-sport)



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